

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A radio cell station apparatus in a mobile communication system, signals received in said mobile communication system including already-known reference signals, comprising:
search means for searching for a reference signal already used in a neighboring cell station;
storage means for storing the reference signal detected by said search means; and
reference signal allocation means for allocating, when a connection request is received from a terminal device, a reference signal different from the reference signal stored in said storage means.
2. (Previously Presented) The radio cell station apparatus according to claim 1, wherein
before the connection request is received from said terminal device, said search means receives in advance a communication signal communicated between said neighboring cell station and a terminal device communicating with said neighboring cell station, and analyzes a reference signal in use from the received communication signal, and
said storage means stores and holds said analyzed reference signal.
3. (Previously Presented) The radio cell station apparatus according to claim 2, wherein
said search means searches for the reference signal used in said neighboring cell station for each traffic slot allocated to said terminal device.
4. (Previously Presented) A radio cell station apparatus in a mobile communication system, signals transmitted/received in said mobile communication system including already-known reference signals, comprising:

storage means for storing a plurality of reference signals different from each other;
and

reference signal allocation means for randomly selecting, when a connection request is received from a terminal device, a reference signal from said storage means based on a cell station number assigned to each cell station and allocating the reference signal to said terminal device.

5. (Previously Presented) The radio cell station apparatus according to claim 4,
wherein

said reference signal allocation means allocates an i -th reference signal corresponding to value i of a remainder of division of said cell station number by total number m of reference signals stored in said storage means, where m is a natural number and i is a natural number of at most m .

6. (Original) A reference signal allocation method performed by a radio cell station apparatus in a mobile communication system, signals received in said mobile communication system including already-known reference signals, comprising the steps of:
searching for a reference signal already used in a neighboring cell station;
storing said reference signal detected; and
allocating, when a connection request is received from a terminal device, a reference signal different from said reference signal stored.

7. (Original) The reference signal allocation method according to claim 6,
further comprising the steps of:

before the connection request is received from said terminal device, receiving in advance a communication signal communicated between said neighboring cell station and a terminal device communicating with said neighboring cell station, and analyzing a reference signal in use from the received communication signal; and

storing said analyzed reference signal.

8. (Original) The reference signal allocation method according to claim 7, further comprising the step of searching for the reference signal used in said neighboring cell station for each traffic slot allocated to said terminal device.

9. (Previously Presented) A reference signal allocation method performed by a radio cell station apparatus in a mobile communication system, signals transmitted/received in said mobile communication system including already-known reference signals, comprising the steps of:

storing a plurality of reference signals different from each other; and
randomly selecting, when a connection request is received from a terminal device, a reference signal from said plurality of reference signals based on a cell station number assigned to each cell station and allocating the reference signal to said terminal device.

10. (Original) The reference signal allocation method according to claim 9, further comprising the step of allocating an i -th reference signal corresponding to value i of a remainder of division of said cell station number by total number m of said reference signals stored, where m is a natural number and i is a natural number of at most m .

11. (Currently Amended) A computer readable medium containing program code which, when executed, causes a radio cell station apparatus in a mobile communication system to execute a reference signal allocation method ~~program performed by a radio cell station apparatus in a mobile communication system~~, signals received in said mobile communication system including already-known reference signals, and said method comprising ~~program performed for a computer to execute~~ the steps of:

searching for a reference signal already used in a neighboring cell station;
storing said reference signal detected; and
allocating, when a connection request is received from a terminal device, a reference signal different from said reference signal stored.

12. (Currently Amended) The reference signal allocation method program according to claim 11, said method further comprising program performed for the computer to further execute the steps of:

before the connection request is received from said terminal device, receiving in advance a communication signal communicated between said neighboring cell station and a terminal device communicating with said neighboring cell station, and analyzing a reference signal in use from the received communication signal; and
storing said analyzed reference signal.

13. (Currently Amended) The reference signal allocation method program according to claim 12, said method further comprising program performed for the computer to further execute the step of searching for the reference signal used in said neighboring cell station for each traffic slot allocated to said terminal device.

14. (Currently Amended) A computer readable medium containing program code which, when executed, causes a radio cell station apparatus in a mobile communication system to execute a reference signal allocation method program performed by a radio cell station apparatus in a mobile communication system, signals transmitted/received in said mobile communication system including already-known reference signals, and said method comprising program performed for a computer to execute the steps of:

storing a plurality of reference signals different from each other; and
randomly selecting, when a connection request is received from a terminal device, a reference signal from said plurality of reference signals based on a cell station number assigned to each cell station and allocating the reference signal to said terminal device.

15. (Currently Amended) The reference signal allocation method program according to claim 14, said method further comprising program performed for the computer to further execute the step of allocating an i -th reference signal corresponding to value i of a remainder of division of said cell station number by total number m of said reference signals stored, where m is a natural number and i is a natural number of at most m .